



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,574	05/14/2004	Paul A. Manfredi	BUR920030148US1	3573
21918 7590 03/23/2009 DOWNS RACHLIN MARTIN PLLC 199 MAIN STREET P O BOX 190 BURLINGTON, VT 05402-0190				
EXAMINER				
KARLS, SHAY LYNN				
ART UNIT		PAPER NUMBER		
3723				
MAIL DATE		DELIVERY MODE		
03/23/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/709,574

Applicant(s)

MANFREDI, PAUL A.

Examiner

Shay L. Karls

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,5,7,10,14,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,5,7,10,14,17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawn (IBM Disclosure Bulletin) as evidenced by Lur et al. (USPN 6743721) in view of Kitamura (USPN 5508879).

With regards to claim 17, Hawn teaches a system for discharging unwanted potentials on a dielectric surface. Hawn teaches grounding a conductive brush (line 3) which contacts the dielectric surface and as evidenced by Lur, a wafer comprises dielectric surfaces and silicon surfaces (col. 1, lines 42-46). Thus Hawn's device could be used to discharge the dielectric surface of a wafer. Hawn further teaches electrically grounding the apparatus with an electrically conductive path extending from the article to the ground (lines 3-4).

With regards to claim 10, the method of removing contaminants from a surface of a wafer comprises the steps of cleaning the surface with a conductive cleaning member (line 3) and contacting the wafer with the conductive cleaning member connected to an electrical ground (lines 3-4).

Hawn teaches all the essential elements of the claimed invention however fails to teach that the conductive brush rotates. Kitamura teaches a roller having fibers filled with an electrically conductive material (col. 5, lines 27-31 state that the fibers of the roller are made from polypropylene nylon or polyester filled with a conductive material such as carbon). The roller rotates about an axis to remove contaminants from a surface.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the brush of Hawn with the rotating brush of Kitamura so that the brush will be capable of effectively removing charges from surface of the wafer and so that the brush will provide an efficient cleaning operation (col. 5, lines 36-42). Further having a rotating brush will allow the brush to remove contaminants more efficiently than a stationary brush.

Claims 4-5, 7, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawn in view of Kitamura as applied to claims 10 and 17 above and further in view of Conductiveplastics.com.

Hawn and Kitamura teach all the essential elements of the claimed invention however fail to teach that the roller is made from a non-filamentous cleaning surface. The conductiveplastics.com website teaches a non-filamentous conductive flexible polyurethane foam. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the material used on the conductive brush of Kitamura with the conductive foam

as taught by conductiveplastics.com since both have similar properties and functions. Both the brush of Kitamura and the foam of conductiveplastics.com are equally capable of removing surface contaminants but the foam of conductiveplastics.com would eliminate any sloughing, corrosiveness or particulate that could occur with the brush of Kitamura.

Additionally, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use perfluoralkoxyalkane as the polymer for the brush, since it has been held within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. *In re Leshin*, 125 USPQ 416.

Response to Arguments

Applicant's arguments filed 1/8/09 have been fully considered but they are not persuasive.

The applicant argues that electrostatic charge is not considered surface contaminants. In response, the applicant's specification states in paragraph 0015 that contaminants **may include, but are not limited to**, particles, mobile ions and trace metals. Therefore, since the applicant states that contaminants are not limited to only those listed, it is clear that electrostatic charge, as well as many other things, can be considered a contaminant. Further, in paragraph 0018 of the applicant's own specification, the applicant states that static electrical charge can be considered detrimental to an article. Thus, electrostatic charge is an unwanted contaminant and needs to be removed.

The applicant further argues that Kitamura teaches removal of excess or extraneous toner particles. In response, Kitamura teaches a charge removal brush with a number of long

conductive filamentous elements for removing charges from an object (abstract). The charge removal brush can also be used for other various applications. For example, the brush is capable of effectively removing charges from recording papers and the image transfer drums in an image forming apparatus (col. 5, lines 36-40). A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Therefore, since the charge removal brush is capable of removing charges from an object (abstract) then it is clear that it meets the claim limitations, regardless of the other applications it is capable of performing. Thus, replacing the charge removal brush of Hawn for the charge removal brush of Kitamura would have been obvious since they are equivalent structures known in the art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 7:00-4:30 M-W.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shay L Karls/
Primary Examiner, Art Unit 3723